

# **Range Telephone Cooperative - Montana**

## **5 Year Service Quality Improvement Plan**

### **2016 Update & Progress Report**

#### **Introduction**

Range Telephone Cooperative, Inc. is an ETC serving 2 study areas, one in Montana and one in Wyoming. The Montana study area is 11,972 square miles in eastern Montana served by 12 wire centers with 4,224 current access lines. Range has the following wire centers:

Wire Center	Sq. Miles	Access Lines
Ashland	1,423	604
Alzada	949	80
Birney	337	80
Broadus	320	534
Busby	337	258
Decker	804	183
Hysham	1,324	440
Lame Deer	549	1,147
North Broadus	936	118
Rosebud	1,084	273
South Broadus	1,863	301
South Miles City	1,893	206
Total	11,972	4,224

#### **Current USAC Information**

Per the Universal Service Administrative Company (USAC) Range Telephone Cooperative, Montana received a total of \$941,171 in USF support funds year to date 05.31.2016. The breakdown of the funding to time of filing is:

High Cost Loop	\$ 183,441
ICLS	\$ 487,935
CAF ICC	\$ <u>269,795</u>
	\$ 941,171

These Universal Service Funds (USF) are used to maintain, upgrade and improve the Range Telephone network, and to cover operating expenses and debt commitments as necessary to continue offering affordable voice and broadband services within its authorized serving areas.

USF will continue to be included in Range Telephones current revenue accounts and forward-looking projections. Total Revenues are used for both capital expenditures as well as covering operating expenses and fixed costs incurred in obtaining capital from lenders. Range

Telephone does not segregate USF separately for purposes of capital and operating expenditures. USF is expended in the same proportion as all other revenues.

The proportionate share of USF expenditures year to date 2016 allocated for CAPEX is estimated to be \$590,137 or 63%, and for OPEX is estimated to be \$351,034 or 37%.

(Note: A greater share of USF is spent on CAPEX during the 2<sup>nd</sup> half of a given year when Range's traditional construction season begins in mid-May and ends by November)

This 5 year improvement plan is a section of the Company's 2015 Annual Report. It is in compliance with # 54.313(a)(1) adopted in the FCC USF/ICC Transformation Order (11-161).

Range has developed its improvement plan, concentrating on the delivery and continuation of a robust network which provides, at a minimum, the federally required voice and broadband connectivity as stipulated by regulatory rule.

## **5 Year Service Quality Improvement Plan by Year**

For the next 5 years Range will deploy Broadband Loop Carrier (BLC) equipment to support increased bandwidth to its end users and to collapse its legacy circuit switched voice network into its next generation packet switched voice network. The majority of this Plan entails replacing traditional copper T-carrier facilities with Fiber to The Node (FTTN) infrastructure in support of the new BLC being deployed. In an effort to minimize retained copper loop lengths, additional BLC nodes will be designed for installation either during initial placement of the FTTN facilities or in a subsequent Plan year. Fixed wireless will also be considered where such technology may be more economically feasible to meet the same objective. As this Plan is implemented all subscribers falling within the definition of 'reasonable request' will have access to broadband service at speeds defined by the FCC.

### **Plan Year 2015**

#### **DECKER EXCHANGE – MONTANA**

#### **ASH CREEK FIBER TO THE NODE CONSTRUCTION - ASCR**

The Montana section of the Decker to Ash Creek Fiber Project includes new placement of approximately 2.93 route miles of fiber optic infrastructure. This new infrastructure will replace copper T-Carrier span lines currently used to trunk Digital Loop Carrier (DLC) facilities in this area. Direct buried cable placement method is planned for this project. The Ash Creek Electronic Serving Area Interface (ESAI) is located in Montana and serves a twelve (12) square mile area. It currently does not connect any premises in Montana but serves as the ESAI for fourteen (14) Wyoming connected premises. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2015 calendar year.

**2015 Update:** This project is under construction.

**2016 Update:** Project completed 4Q-2015.

#### **DECKER EXCHANGE – MONTANA**

#### **TONGUE RIVER DAM FIBER TO THE NODE CONSTRUCTION – TNRD**

~~The Tongue River Dam Fiber Project includes new placement of approximately 3 route miles of fiber optic infrastructure. This new infrastructure will replace copper T Carrier span lines currently used to trunk Digital Loop Carrier (DLC) facilities in this area. Direct buried cable placement method is planned for this project. The Tongue River Dam Electronic Serving Area Interface (ESAI) connects eighteen (18) premises in a seventeen (17) square mile area. Anticipated funding for this project will be provided under a new Rural Utilities Service loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2015 calendar year.~~

**2015 Update:** This project is in progress.

**2016 Update:** Right-of-way problems. This project has been moved out to 2017.

## **DECKER EXCHANGE – MONTANA:**

### **CENTRAL OFFICE AND REMOTE BROADBAND LOOP CARRIER UPGRADES - DCKRMT**

This project includes the installation of new Broadband Loop Carrier (BLC) electronics in the Decker, MT Central Office and subtending remote electronics sites to serve Montana connected premises. This project will not only support increased broadband capability within the Decker exchange area but will also allow for the collapse of a legacy DMS-10 circuit switch into the recently placed Metaswitch packet switch in 2015. Current copper plant service delivery to the subscribers will be retained. The Decker Central Office serves sixty nine (69) Montana premises in a seven hundred and ninety nine (799) square mile area. Current broadband speeds average 3Mbps downstream and 512Kbps upstream. The new BLC electronics will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2015 calendar year.

**2015 Update: This project is in progress.**

**2016 Update: Completed**

## **DECKER EXCHANGE - MONTANA**

### **SPRING CREEK HUT FIRE SUPPRESSION -SPRK**

The project includes installation of a new fire suppression system at Spring Creek. Special concerns are this is a remote site that is sometimes very hard to get to and a Fire Suppression system is recommended. This site serves thirteen (13) connected premises but also serves as a regeneration/amplification site for middle-mile optical transport systems. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Expected completion of this project is within the 2015 calendar year.

**2015 Update: This project is in progress.**

**2016 Update: Completed**

## **DECKER EXCHANGE – MONTANA**

### **KIRBY HUT FIRE SUPPRESSION - KRBY**

The project includes installation of a new Fire Suppression system at Home Creek Butte. Special concerns are this is a remote site that is sometimes very hard to get to and a Fire Suppression system is recommended. This site serves twenty four (24) connected premises but also serves as a regeneration/amplification site for middle-mile optical transport systems. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Expected completion of this project is within the 2015 calendar year.

**2015 Update: This project is in progress.**

**2016 Update: Completed**

## **ALZADA EXCHANGE – MONTANA**

### **ALBION FIBER TO THE PREMISE CONSTRUCTION – ALBN**

~~This project includes the new placement of approximately 5 route miles of FTTP access infrastructure and new Broadband Loop Carrier (BLC) electronics which will replace first generation Digital Loop Carrier (DLC) currently in place and trunked with fiber. Current broadband speeds average 3Mbps downstream and 512Kbps upstream. The new FTTP access~~

~~infrastructure will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Direct buried cable placement method is planned for this project. The Albion Electronic Serving Area Interface (ESAI) connects nine (9) premises in a twenty one (21) square mile area. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2015 calendar year.~~

**2015 Update:** This project has been removed due to priority change.

**2016 Update:** N/A

#### **ALZADA EXCHANGE - MONTANA**

#### **ALZADA HVAC EQUIPMENT REPLACEMENT - ALZDMT**

This project includes the replacement of an aging heating and air conditioning system that is at or near life expectancy. This site serves sixty one (61) connected premises in a one thousand and eighty nine (1,089) square mile area. Anticipated funding for this project will be provided from general funds and completion of this project is within the 2015 calendar year.

**2015 Update:** Ongoing

**2016 Update:** Completed in 2015

#### **LAME DEER EXCHANGE - MONTANA**

#### **CENTRAL OFFICE AND REMOTE BROADBAND LOOP CARRIER UPGRADES - LMDRMT**

This project includes the installation of new Broadband Loop Carrier (BLC) electronics in the Lame Deer, MT Central Office and subtending remote electronics sites. This project will not only support increased broadband capability within the Lame Deer exchange area but will also allow for the collapse of a legacy DMS-10 circuit switch into the recently placed Metaswitch packet switch in 2015. Current copper plant service delivery to the subscribers will be retained. The Lame Deer Central Office serves five hundred and twelve (512) connected premises in a five hundred and forty nine (549) square mile area. Current broadband speeds average 3Mbps downstream and 512Kbps upstream. The new BLC electronics will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2015 calendar year.

**2015 Update:** This project is in progress.

**2016 Update:** This project is in progress. To be completed in 2016.

#### **LAME DEER EXCHANGE – MONTANA**

#### **MUDGY CLUSTER GENERATOR ADDITION - MCLS**

The project includes installation of a new emergency standby power generator to assure reliable delivery of broadband and voice services in the event of a commercial power failure. The Muddy Cluster site serves eighty three (83) connected premises in a twenty three (23) square mile area. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Expected completion of this project is within the 2015 calendar year.

**2015 Update:** Ongoing

**2016 Update:** Completed

## **ASHLAND EXCHANGE - MONTANA**

### **EAST FORK HUT GENERATOR ADDITION - EFOC**

The project includes installation of a new emergency standby power generator to assure reliable delivery of broadband and voice services in the event of a commercial power failure. This site serves seventeen (17) in a twenty one (21) square mile area. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Expected completion of this project is within the 2015 calendar year.

**2015 Update: Final Design in Progress**

**2016 Update: Completed**

## **BIRNEY EXCHANGE - MONTANA**

### **CENTRAL OFFICE AND REMOTE BROADBAND LOOP CARRIER UPGRADES - BIRNCO**

This project includes the installation of new Broadband Loop Carrier (BLC) electronics in the Birney, MT Central Office and subtending remote electronics sites. This project will not only support increased broadband capability within the Birney exchange area but will also allow for the collapse of a legacy DMS-10 circuit switch into the recently placed Metaswitch packet switch in 2016. Current copper plant service delivery to the subscribers will be retained. The Birney Central Office serves forty five (45) connected premises in a three hundred and thirty seven (337) square mile area. Current broadband speeds average 3Mbps downstream and 512Kbps upstream. The new BLC electronics will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2015 calendar year.

**2015 Update: Moved to year 2016 due to priority change.**

## **NORTH BROADUS EXCHANGE - MONTANA**

### **CENTRAL OFFICE AND REMOTE BROADBAND LOOP CARRIER UPGRADES - BRDMT**

This project includes the installation of new Broadband Loop Carrier (BLC) electronics in the North Broadus, MT Central Office and subtending remote electronics sites. This project will not only support increased broadband capability within the North Broadus exchange area but will also allow for the collapse of a legacy DMS-10 circuit switch into the recently placed Metaswitch packet switch in 2016. Current copper plant service delivery to the subscribers will be retained. The North Broadus Central Office serves sixty two (62) connected premises in a nine hundred and thirty six (936) square mile area. Current broadband speeds average 3Mbps downstream and 512Kbps upstream. The new BLC electronics will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2015 calendar year.

**2015 Update: This project is in progress.**

**2016 Update: Completed**

## **HYSHAM EXCHANGE - MONTANA**

### **TULLOCK CREEK BUILDING REPLACEMENT - TLCK**

This project will replace an existing equipment shelter that is beginning to collapse. The equipment shelter houses Digital Loop Carrier (DLC) equipment connecting seventeen (17) premises in a thirteen (13) square mile area. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2015 calendar year.

**2015 Update: This project is in progress.**

**2016 Update: This project is in progress. To be completed in 2016.**

## **ALL EXCHANGE AREAS – MONTANA/WYOMING**

### **TECHNICIAN SERVICE VEHICLES**

In 2015 Range plans to replace four (4) gasoline engine service trucks. We currently have several high mileage service trucks and will decide on specific unit numbers for replacement as needed in the year. Due to Range Telephone Cooperative's service area being very large the mileage put on each service truck yearly is very high. To ensure the safety of employees as well as ensuring serviceable vehicles, the company must regularly replace service trucks. The service vehicle replacements are estimated to cost \$28,750 each for a total of \$115,000 in 2015.

**2016 Update: Completed.**

## **Plan Year 2016**

### **ASHLAND EXCHANGE - MONTANA**

#### **NORTH ASHLAND TO SOUTH MILES CITY A-HUT FIBER TO THE NODE CONSTRUCTION - NASH**

This project includes new placement of approximately 18 route miles of fiber optic infrastructure to connect two Electronic Serving Area Interfaces (ESAI's). Direct buried cable placement method is planned for this project. The North Ashland Electronic Serving Area Interface (ESAI) connects thirteen (13) premises in a twenty two (22) square mile area and the South Miles City A-Hut connects seven (7) premises in a twenty (20) square mile area. The fiber construction will also provide route diversity between the two exchanges in subsequent plan years. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.

**2016 Update: In progress**

### **ASHLAND EXCHANGE - MONTANA**

#### **FORT HOWE FIBER TO THE NODE CONSTRUCTION - FHOW**

This project includes new placement of approximately 23.3 route miles of fiber optic infrastructure to connect existing Digital Loop Carrier (DLC) electronics. Direct buried cable placement method is planned for this project. The Fort Howe Electronic Serving Area Interface (ESAI) connects twenty three (23) premises in a twenty four (24) square mile area. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to

contract service providers. Expected completion of this project is within the 2016 calendar year.

**2016 Update: In progress**

**ASHLAND EXCHANGE—MONTANA**

**EAST FORK AND HOME CREEK FIBER TO THE NODE CONSTRUCTION—EFOK**

~~This project includes new placement of approximately 23.7 route miles of fiber optic infrastructure to connect the East Fork Electronic Serving Area Interface (ESAI) and a microwave site at Home Creek. This new infrastructure will replace copper T Carrier span lines currently used to trunk Digital Loop Carrier (DLC) facilities in this area. The East Fork ESAI connects eleven (11) premises in a nineteen (19) square mile area. When complete the new site will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.~~

**2016 Update: In progress. Has been moved to 2017 due to forest service permit issues.**

**ASHLAND EXCHANGE—MONTANA**

**DOUBLE E FIBER TO THE NODE CONSTRUCTION—DBEE**

~~This project includes new placement of approximately 3 route miles of fiber optic infrastructure to connect the Double E Electronic Serving Area Interface (ESAI) on the Northern Cheyenne Indian Reservation. This new infrastructure will replace copper T Carrier span lines currently used to trunk Digital Loop Carrier (DLC) facilities in this area. The Double E ESAI connects fifteen (15) premises in an eight (8) square mile area. When complete the new site will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.~~

**2016 Update: Environmental issues and Right-of-way issues. Moved to 2017.**

**ASHLAND EXCHANGE—MONTANA**

**NORTH ASHLAND FIBER TO THE NODE CONSTRUCTION—ASHN**

~~This project includes new placement of approximately 18 route miles of fiber optic infrastructure to connect the North Ashland Electronic Serving Area Interface (ESAI) on the Northern Cheyenne Indian Reservation. This new infrastructure will replace copper T Carrier span lines currently used to trunk Digital Loop Carrier (DLC) facilities in this area. The North Ashland ESAI connects thirteen (13) premises in a twenty two (22) square mile area. When complete the new site will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.~~

**2016 Update: Environmental issues and Right-of-way issues. Moved to 2017.**

## **ASHLAND EXCHANGE - MONTANA**

### **ASHLAND-LAME DEER DIVIDE FIBER TO THE NODE CONSTRUCTION - ASHD**

The Ashland-Lame Deer Divide FTTN project includes new placement of approximately .5 route miles of fiber optic infrastructure to connect a new Electronic Serving Area Interface (ESAI) on the Northern Cheyenne Indian Reservation. The new Ashland-Lame Deer Divide ESAI will connect twenty (13) premises in a twenty five (25) square mile area. When complete the new site will support broadband service speeds of 20MB downstream and 5MB upstream.

Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.

**2016 Update: In Progress**

## **~~ASHLAND EXCHANGE - MONTANA~~**

### **~~CENTRAL OFFICE AND REMOTE BROADBAND LOOP CARRIER UPGRADES - ASHLDMT~~**

~~This project includes the installation of new Broadband Loop Carrier (BLC) electronics in the Ashland, MT Central Office and subtending remote electronics sites. This project will not only support increased broadband capability within the Ashland exchange area but will also allow for the collapse of a legacy DMS 10 circuit switch into the recently placed Metaswitch packet switch in 2016. Current copper plant service delivery to the subscribers will be retained. The Ashland Central Office serves two hundred and fifty six (256) connected premises in a one thousand four hundred and twenty three (1,423) square mile area. Current broadband speeds average 3Mbps downstream and 512Kbps upstream. The new BLC electronics will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.~~

**2016 Update: Moved to 2017 due to priority change.**

## **~~LAME DEER EXCHANGE - MONTANA~~**

### **~~BIRNEY DIVIDE FIBER TO THE NODE CONSTRUCTION - BNYD~~**

~~The Birney Divide FTTN project includes new placement of approximately 4.75 route miles of fiber optic infrastructure and electronics to establish a new Electronic Serving Area Interface (ESAI) on the Northern Cheyenne Indian Reservation. The new Birney Divide ESAI will connect twenty (20) premises in a thirty one (31) square mile area. When complete the new site will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.~~

**2016 Update: Right-of-way issues. Moved to 2017**

## **~~LAME DEER EXCHANGE - MONTANA~~**

### **~~BURNS TRAILER COURT FIBER TO THE NODE CONSTRUCTION - BURN~~**

~~The Burns Trailer Court FTTN project includes new placement of approximately .45 route miles of fiber optic infrastructure and electronics to an existing Electronic Serving Area Interface (ESAI) on the Northern Cheyenne Indian Reservation. The ESAI connects twenty five (25)~~

~~premises in a thirteen (13) square mile area. When complete the ESAI will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.~~

**2016 Update: Right-of-way Issues. Moved to 2017.**

#### **BUSBY EXCHANGE - MONTANA**

##### **~~BUSBY WEST FIBER TO THE NODE CONSTRUCTION – BSBW~~**

~~The Busby West FTTN project includes new placement of approximately 9 route miles of fiber optic infrastructure to an existing Electronic Serving Area Interface (ESAI) on the Northern Cheyenne Indian Reservation. The new Busby West ESAI will connect eight (8) premises in a thirty one (31) square mile area. When complete the ESAI will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.~~

**2015 Update: This project was moved from 2017 to 2016 because the priority changed.**

**2016 Update: Right-of-way Issues. Moved to 2017**

#### **BUSBY EXCHANGE - MONTANA**

##### **~~GEORGE HAMMOND FIBER TO THE NODE CONSTRUCTION – HAMM~~**

~~The George Hammond FTTN project includes new placement of approximately 12 route miles of fiber optic infrastructure to an existing Electronic Serving Area Interface (ESAI) known as Busby #2 on the Northern Cheyenne Indian Reservation. New fiber access facilities will be constructed to replace a wireless radio and connect seven (7) premises in a two (2) square mile area where no broadband access currently exists. When complete the ESAI will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.~~

**2015 Update: This project was moved from 2017 to 2016 because the priority changed.**

**2016 Update: Right-of-way issues. Moved to 2017.**

#### **BUSBY EXCHANGE - MONTANA**

##### **CENTRAL OFFICE AND REMOTE BROADBAND LOOP CARRIER UPGRADES –BSBYMT**

This project includes the installation of new Broadband Loop Carrier (BLC) electronics in the Busby, MT Central Office and subtending remote electronics sites. This project will not only support increased broadband capability within the Busby exchange area but will also allow for the collapse of a legacy DMS-10 circuit switch into the recently placed Metaswitch packet switch in 2016. Current copper plant service delivery to the subscribers will be retained. The Busby Central Office serves one hundred and sixty two (162) connected premises in a five hundred and twenty five (525) square mile area. Current broadband speeds average 3Mbps downstream and 512Kbps upstream. The new BLC electronics will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the

engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2017 calendar year.

**2016 Update: In progress.**

#### **BIRNEY EXCHANGE - MONTANA**

#### **CENTRAL OFFICE AND REMOTE BROADBAND LOOP CARRIER UPGRADES -BIRNCO**

This project includes the installation of new Broadband Loop Carrier (BLC) electronics in the Birney, MT Central Office and subtending remote electronics sites. This project will not only support increased broadband capability within the Birney exchange area but will also allow for the collapse of a legacy DMS-10 circuit switch into the recently placed Metaswitch packet switch in 2016. Current copper plant service delivery to the subscribers will be retained. The Birney Central Office serves forty five (45) connected premises in a three hundred and thirty seven (337) square mile area. Current broadband speeds average 3Mbps downstream and 512Kbps upstream. The new BLC electronics will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2015 calendar year.

**2015 Update: Moved to year 2016 due to priority change.**

**2016 Update: In progress.**

#### **RANGE TELEPHONE COOPERATIVE-ALL EXCHANGES**

#### **TECHNICIAN SERVICE TRUCK VEHICLES**

In 2016 Range plans to replace four  $\frac{3}{4}$  ton gasoline engine service trucks. We currently have several high mileage service trucks and will decide on specific unit numbers for replacement as needed in the year. Due to Range Telephone Cooperative's service area being very large the mileage put on each service truck yearly is very high. To ensure the safety of employees as well as ensuring serviceable vehicles, the company must regularly replace service trucks. The service truck replacements are estimated to cost \$28,750 each for a total of \$115,000 in 2016.

**2016 Update: In progress - 2 vehicles purchased to date.**

#### **LAME DEER EXCHANGE - MONTANA**

#### **CENTRAL OFFICE AND REMOTE BROADBAND LOOP CARRIER UPGRADES - LMDRMT**

This project includes the installation of new Broadband Loop Carrier (BLC) electronics in the Lame Deer, MT Central Office and subtending remote electronics sites. This project will not only support increased broadband capability within the Lame Deer exchange area but will also allow for the collapse of a legacy DMS-10 circuit switch into the recently placed Metaswitch packet switch in 2015. Current copper plant service delivery to the subscribers will be retained. The Lame Deer Central Office serves five hundred and twelve (512) connected premises in a five hundred and forty nine (549) square mile area. Current broadband speeds average 3Mbps downstream and 512Kbps upstream. The new BLC electronics will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2015 calendar year.

**2015 Update: This project is in progress. 2016 Update: This project to be completed 2016.**

**LAME DEER EXCHANGE – MONTANA****MUDY CLUSTER GENERATOR ADDITION - MCLS**

The project includes installation of a new emergency standby power generator to assure reliable delivery of broadband and voice services in the event of a commercial power failure. The Muddy Cluster site serves eighty three (83) connected premises in a twenty three (23) square mile area. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Expected completion of this project is within the 2015 calendar year.

**2015 Update: This Project is in Progress**

**2016 Update: Completed**

**ASHLAND EXCHANGE - MONTANA****EAST FORK HUT GENERATOR ADDITION - EFOC**

The project includes installation of a new emergency standby power generator to assure reliable delivery of broadband and voice services in the event of a commercial power failure. This site serves seventeen (17) in a twenty one (21) square mile area. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Expected completion of this project is within the 2015 calendar year.

**2015 Update: This Project is in Progress**

**2016 Update: Completed**

**ASHLAND EXCHANGE - MONTANA****HOME CREEK BUTTE OFFICE POWER BOARD AND GENERATOR REPLACEMENT - HCBT**

This project includes installation of a new Direct Current (DC) Power plant and emergency standby generator to replace an aging system that has reached its life expectancy. Special concerns in this project include keeping reliable Central Office DC and Backup Power to maintain operation of all local transport and access services. This new power system and standby generator will assure reliable delivery of broadband and voice services in the event of a commercial power failure. This site serves several wireless radio communications systems for both private, local government and law enforcement use. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Expected completion of this project is within the 2015 calendar year.

**2015 Update: This project is in progress.**

**2016 Update: This project is in progress. To be completed in 2016.**

**ASHLAND EXCHANGE - MONTANA****HOME CREEK BUTTE OFFICE FIRE SUPPRESSION - HCBT**

The project includes installation of a new Fire Suppression system at Home Creek Butte. Special concerns are this is a remote site that is sometimes very hard to get to and a Fire Suppression system is recommended. This site serves several wireless radio communications systems for both private, local government and law enforcement use. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Expected completion of this project is within the 2015 calendar year.

**2015 Update: This project is in progress.**

**2016 Update: Completed**

## **Plan Year 2017**

### **SOUTH BROADUS EXCHANGE - MONTANA**

#### **AC POWER TO NORTH-NORTH BOYES ACCESS CARRIER SITE - NNBS**

This project includes the construction of a new AC commercial power line to the North-North Boyes Electronic Serving Area Interface (ESAI) which is currently remote powered. The North-North Boyes ESAI connects three (3) premises in a fifty (50) mile area. Expected completion of this project is within the 2017 calendar year.

### **BUSBY EXCHANGE - MONTANA**

#### **CENTRAL OFFICE AND REMOTE BROADBAND LOOP CARRIER UPGRADES - BSBYMT**

~~This project includes the installation of new Broadband Loop Carrier (BLC) electronics in the Busby, MT Central Office and subtending remote electronics sites. This project will not only support increased broadband capability within the Busby exchange area but will also allow for the collapse of a legacy DMS-10 circuit switch into the recently placed Metaswitch packet switch in 2016. Current copper plant service delivery to the subscribers will be retained. The Busby Central Office serves one hundred and sixty two (162) connected premises in a five hundred and twenty five (525) square mile area. Current broadband speeds average 3Mbps downstream and 512Kbps upstream. The new BLC electronics will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2017 calendar year.~~

**2015 Update:** This project moved from 2017 to 2016 due to priority change.

### **BUSBY EXCHANGE - MONTANA**

#### **BUSBY WEST FIBER TO THE NODE CONSTRUCTION - BSBW**

~~The Busby West FTTN project includes new placement of approximately 9 route miles of fiber optic infrastructure to an existing Electronic Serving Area Interface (ESAI) on the Northern Cheyenne Indian Reservation. The new Busby West ESAI will connect eight (8) premises in a thirty one (31) square mile area. When complete the ESAI will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.~~

**2015 Update:** This project was moved from 2017 to 2016 because the priority changed.

### **BUSBY EXCHANGE - MONTANA**

#### **GEORGE HAMMOND FIBER TO THE NODE CONSTRUCTION - HAMM**

~~The George Hammond FTTN project includes new placement of approximately 12 route miles of fiber optic infrastructure to an existing Electronic Serving Area Interface (ESAI) known as Busby #2 on the Northern Cheyenne Indian Reservation. New fiber access facilities will be constructed to replace a wireless radio and connect seven (7) premises in a two (2) square mile area where no broadband access currently exists. When complete the ESAI will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for~~

~~this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers.~~  
**2015 Update:** This project was moved from 2017 to 2016 because the priority changed.

#### **SOUTH MILES CITY EXCHANGE - MONTANA**

#### **TONGUE RIVER ROAD FIBER TO THE NODE CONSTRUCTION - TRVR**

The Tongue River Road FTTN project includes new placement of approximately 10 route miles of fiber optic infrastructure and electronics to establish a new Electronic Serving Area Interface (ESAI). The new Tongue River Road ESAI will connect eighteen (18) premises in a thirty five (35) square mile area. When complete the new site will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2017 calendar year.

#### **ROSEBUD EXCHANGE - MONTANA**

#### **NORTH ROSEBUD FIBER TO THE PREMISE CONSTRUCTION - NRSBD**

~~The North Rosebud FTTN project includes new placement of approximately 48 route miles of fiber optic infrastructure to an existing Electronic Serving Area Interface (ESAI). The North Rosebud ESAI connects ninety six (96) premises in a twenty (20) square mile area. When complete the ESAI will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2017 calendar year.~~

**2015 Update:** This project has been removed due to priority change.

#### **BROADUS FIBER TO THE PREMISE CONSTRUCTION - BRDS**

~~The Broadus FTTP project includes new placement of approximately 31 route miles of fiber optic infrastructure. The Broadus ESAI connects four hundred sixteen (416) premises in a twenty (1.5) square mile area. When complete the ESAI will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2017 calendar year.~~

**2016 Update:** Change in priority. Moved to 2019.

#### **ASHLAND EXCHANGE - MONTANA**

#### **DOUBLE E FIBER TO THE NODE CONSTRUCTION - DBEE**

This project includes new placement of approximately 3 route miles of fiber optic infrastructure to connect the Double E Electronic Serving Area Interface (ESAI) on the Northern Cheyenne Indian Reservation. This new infrastructure will replace copper T-Carrier span lines currently used to trunk Digital Loop Carrier (DLC) facilities in this area. The Double E ESAI connects fifteen (15) premises in an eight (8) square mile area. When complete the new site will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the

engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.

**2016 Update: Right-of-way issues in 2015. Moved to 2017.**

#### **ASHLAND EXCHANGE - MONTANA**

##### **NORTH ASHLAND FIBER TO THE NODE CONSTRUCTION - ASHN**

This project includes new placement of approximately 18 route miles of fiber optic infrastructure to connect the North Ashland Electronic Serving Area Interface (ESAI) on the Northern Cheyenne Indian Reservation. This new infrastructure will replace copper T-Carrier span lines currently used to trunk Digital Loop Carrier (DLC) facilities in this area. The North Ashland ESAI connects thirteen (13) premises in a twenty two (22) square mile area. When complete the new site will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.

**2016 Update: Environmental issues and Right-of-way issues in 2015. Moved to 2017.**

#### **ASHLAND EXCHANGE - MONTANA**

##### **EAST FORK AND HOME CREEK FIBER TO THE NODE CONSTRUCTION - EFOK**

This project includes new placement of approximately 23.7 route miles of fiber optic infrastructure to connect the East Fork Electronic Serving Area Interface (ESAI) and a microwave site at Home Creek. This new infrastructure will replace copper T-Carrier span lines currently used to trunk Digital Loop Carrier (DLC) facilities in this area. The East Fork ESAI connects eleven (11) premises in a nineteen (19) square mile area. When complete the new site will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.

**2016 Update: In progress. Has been moved to 2017 due to forest service permit issues.**

#### **ASHLAND EXCHANGE – MONTANA**

##### **CENTRAL OFFICE AND REMOTE BROADBAND LOOP CARRIER UPGRADES - ASHLMNT**

This project includes the installation of new Broadband Loop Carrier (BLC) electronics in the Ashland, MT Central Office and subtending remote electronics sites. This project will not only support increased broadband capability within the Ashland exchange area but will also allow for the collapse of a legacy DMS-10 circuit switch into the recently placed Metaswitch packet switch in 2016. Current copper plant service delivery to the subscribers will be retained. The Ashland Central Office serves two hundred and fifty six (256) connected premises in a one thousand four hundred and twenty three (1,423) square mile area. Current broadband speeds average 3Mbps downstream and 512Kbps upstream. The new BLC electronics will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Anticipated funding for this project will be provided under the current Rural Utilities Service (RUS) 518-V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.

**2016 Update: Moved to 2017 due to priority change.**

**LAME DEER EXCHANGE - MONTANA**

**BIRNEY DIVIDE FIBER TO THE NODE CONSTRUCTION - BNYD**

The Birney Divide FTTN project includes new placement of approximately 4.75 route miles of fiber optic infrastructure and electronics to establish a new Electronic Serving Area Interface (ESAI) on the Northern Cheyenne Indian Reservation. The new Birney Divide ESAI will connect twenty (20) premises in a thirty one (31) square mile area. When complete the new site will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.

**2016 Update: Right-of-way issues. Moved to 2017**

**BUSBY EXCHANGE - MONTANA**

**BUSBY WEST FIBER TO THE NODE CONSTRUCTION - BSBW**

The Busby West FTTN project includes new placement of approximately 9 route miles of fiber optic infrastructure to an existing Electronic Serving Area Interface (ESAI) on the Northern Cheyenne Indian Reservation. The new Busby West ESAI will connect eight (8) premises in a thirty one (31) square mile area. When complete the ESAI will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year. 2015 Update: This project was moved from 2017 to 2016 because the priority changed.

**2016 Update: Right-of-way Issues. Moved to 2017**

**LAME DEER EXCHANGE - MONTANA**

**BURNS TRAILER COURT FIBER TO THE NODE CONSTRUCTION - BURN**

The Burns Trailer Court FTTN project includes new placement of approximately .45 route miles of fiber optic infrastructure and electronics to an existing Electronic Serving Area Interface (ESAI) on the Northern Cheyenne Indian Reservation. The ESAI connects twenty five (25) premises in a thirteen (13) square mile area. When complete the ESAI will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.

**2016 Update: Right-of-way Issues. Moved to 2017.**

**BUSBY EXCHANGE - MONTANA**

**GEORGE HAMMOND FIBER TO THE NODE CONSTRUCTION - HAMM**

The George Hammond FTTN project includes new placement of approximately 12 route miles of fiber optic infrastructure to an existing Electronic Serving Area Interface (ESAI) known as Busby #2 on the Northern Cheyenne Indian Reservation. New fiber access facilities will be constructed to replace a wireless radio and connect seven (7) premises in a two (2) square mile area where no broadband access currently exists. When complete the ESAI will support

broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2016 calendar year.

**2015 Update:** This project was moved from 2017 to 2016 because the priority changed.

**2016 Update:** Right-of-way issues. Moved to 2017.

#### **DECKER EXCHANGE – MONTANA**

#### **TONGUE RIVER DAM FIBER TO THE NODE CONSTRUCTION - TNRD**

The Tongue River Dam Fiber Project includes new placement of approximately 3 route miles of fiber optic infrastructure. This new infrastructure will replace copper T-Carrier span lines currently used to trunk Digital Loop Carrier (DLC) facilities in this area. Direct buried cable placement method is planned for this project. The Tongue River Dam Electronic Serving Area Interface (ESAI) connects eighteen (18) premises in a seventeen (17) square mile area.

Anticipated funding for this project will be provided under a new Rural Utilities Service loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2015 calendar year.

**2015 Update:** This project is in progress.

**2016 Update:** Right-of-way problems. Project moved to 2017.

#### **NORTH BROADUS – MONTANA**

#### **LOCKWOOD FIBER TO THE NODE CONSTRUCTION - LKWD**

The Lockwood Fiber Project includes new placement of approximately 7 route miles of fiber optic infrastructure. Direct buried cable placement method is planned for this project. The Lockwood Electronic Serving Area Interface (ESAI) connects eight (8) premises in an eleven (11) square mile area. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2017 calendar year.

**2016 Update:** New project added.

#### **SOUTH BROADUS– MONTANA**

#### **FIGHTING BUTTE FIBER TO THE NODE CONSTRUCTION - FTBT**

The Fighting Butte Fiber Project includes new placement of a new node into the existing fiber optic infrastructure. The Fighting Butte Electronic Serving Area Interface (ESAI) connects seven (8) premises in a ten (10) square mile area. Expected completion of this project is within the 2017 calendar year.

**2016 Update:** New project added.

#### **RANGE TELEPHONE COOPERATIVE-ALL EXCHANGES**

#### **TECHNICIAN SERVICE TRUCK VEHICLES**

In 2017 Range plans to replace four  $\frac{3}{4}$  ton gasoline engine service trucks. We currently have several high mileage service trucks and will decide on specific unit numbers for replacement as needed in the year. Due to Range Telephone Cooperative's service area being very large the mileage put on each service truck yearly is very high. To ensure the safety of employees as well as ensuring serviceable vehicles, the company must regularly replace service trucks. The service truck replacements are estimated to cost \$28,750 each for a total of \$115,000 in 2017.

**2016 Update: purchase five vehicles for a total cost of \$143,750.**

## **Plan Year 2018**

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### **ROSEBUD EXCHANGE - MONTANA**

#### **NORTH ROSEBUD EAST FIBER TO THE NODE CONSTRUCTION- NRBDE**

The North Rosebud East FTTN project includes new placement of approximately 13 route miles of fiber optic infrastructure and electronics to a new Electronic Serving Area Interface (ESAI). The North Rosebud East ESAI connects twenty one (21) premises in a twenty four (24) square mile area. When complete the new site will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2018 calendar year.

### **RANGE TELEPHONE COOPERATIVE-ALL EXCHANGES**

#### **TECHNICIAN SERVICE TRUCK VEHICLES**

In 2018 Range plans to replace four  $\frac{3}{4}$  ton gasoline engine service trucks. We currently have several high mileage service trucks and will decide on specific unit numbers for replacement as needed in the year. Due to Range Telephone Cooperative's service area being very large the mileage put on each service truck yearly is very high. To ensure the safety of employees as well as ensuring serviceable vehicles, the company must regularly replace service trucks. The service truck replacements are estimated to cost \$29,000 each for a total of \$116,000 in 2018.

## **Plan Year 2019**

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### **DECKER EXCHANGE - WYOMING**

#### **DECKER TO YOUNGS CREEK FIBER TO THE NODE CONSTRUCTION -YNCK**

The Young's Creek FTTN Project includes new placement of approximately 4 route miles of fiber optic infrastructure and new Broadband Loop Carrier (BLC) electronics. This new infrastructure will replace copper T-Carrier span lines currently used to trunk Broadband Loop Carrier (BLC) facilities in this area. The FTTN node will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Direct buried cable placement method is planned for this project. The Young's Creek Electronic Serving Area Interface (ESAI) will connect four (4) premises in a twenty two (22) square mile area. Anticipated funding for this project will be provided under a new Rural Utilities Service loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2019 calendar year.

### **HYSHAM EXCHANGE - MONTANA**

#### **HYSHAM WEST AND EAST FIBER TO THE PREMISE CONSTRUCTION - HYWE**

~~This project includes the new placement of approximately 58 route miles of FTTP access infrastructure and new Broadband Loop Carrier (BLC) electronics. Current broadband speeds average 3Mbps downstream and 512Kbps upstream. The new FTTP access infrastructure will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Direct buried cable placement method is planned for this project. The Hysham West and East ESAI's~~

~~connect one hundred and sixteen (116) premises in a thirty four (34) square mile area. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) 518 V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2019 calendar year.~~

**2015 Update:** This project has been removed due to priority change.

#### **SOUTH MILES CITY EXCHANGE - MONTANA**

#### **A HUT TO T HUT FIBER TO THE PREMISE CONSTRUCTION - AHUT**

~~This project includes the new placement of approximately 9.5 route miles of FTTP access infrastructure and new Broadband Loop Carrier (BLC) electronics. Current broadband speeds average 3Mbps downstream and 512Kbps upstream. The new FTTP access infrastructure will support broadband speeds averaging 20Mbps downstream and 5Mbps upstream. Direct buried cable placement method is planned for this project. The A-Hut and T-Hut ESAs connect nineteen (19) premises in a twenty (20) square mile area. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) 518 V loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2019 calendar year.~~

**2015 Update:** This project has been removed due to priority change.

#### **BROADUS FIBER TO THE PREMISE CONSTRUCTION - BRDS**

The Broadus FTTP project includes new placement of approximately 31 route miles of fiber optic infrastructure and electronics. The Broadus ESAI connects four hundred sixteen (416) premises in a twenty (1.5) square mile area. When complete the ESAI will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2017 calendar year.

**2016 Update: Change in priority. Moved to 2019.**

#### **RANGE TELEPHONE COOPERATIVE-ALL EXCHANGES**

#### **TECHNICIAN SERVICE TRUCK VEHICLES**

In 2019 Range plans to replace four  $\frac{3}{4}$  ton gasoline engine service trucks. We currently have several high mileage service trucks and will decide on specific unit numbers for replacement as needed in the year. Due to Range Telephone Cooperative's service area being very large the mileage put on each service truck yearly is very high. To ensure the safety of employees as well as ensuring serviceable vehicles, the company must regularly replace service trucks. The service truck replacements are estimated to cost \$30,000 each for a total of \$120,000 in 2019.

## **Plan Year 2020**

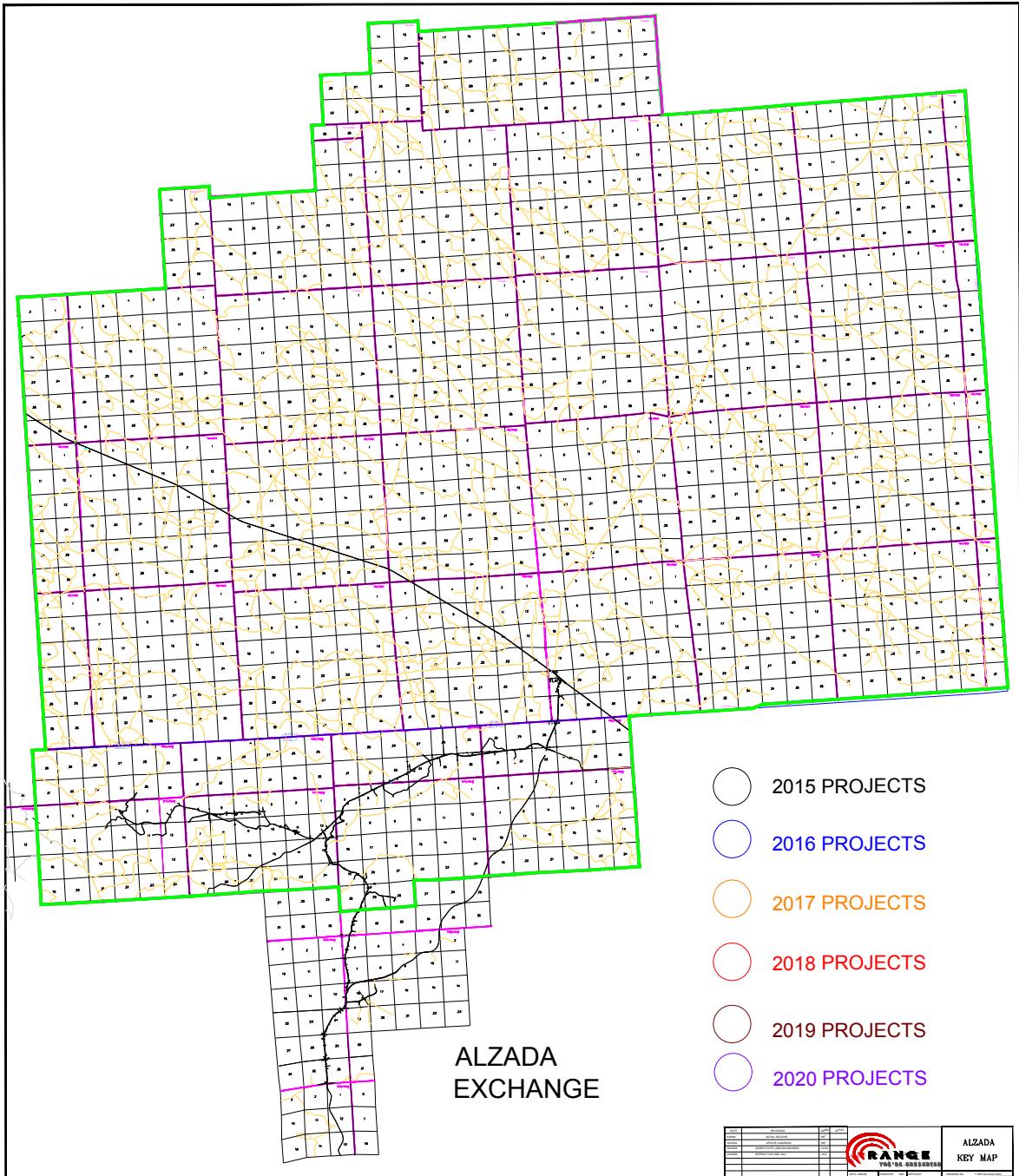
#### **HYSHAM FIBER TO THE PREMISE CONSTRUCTION - HYSM**

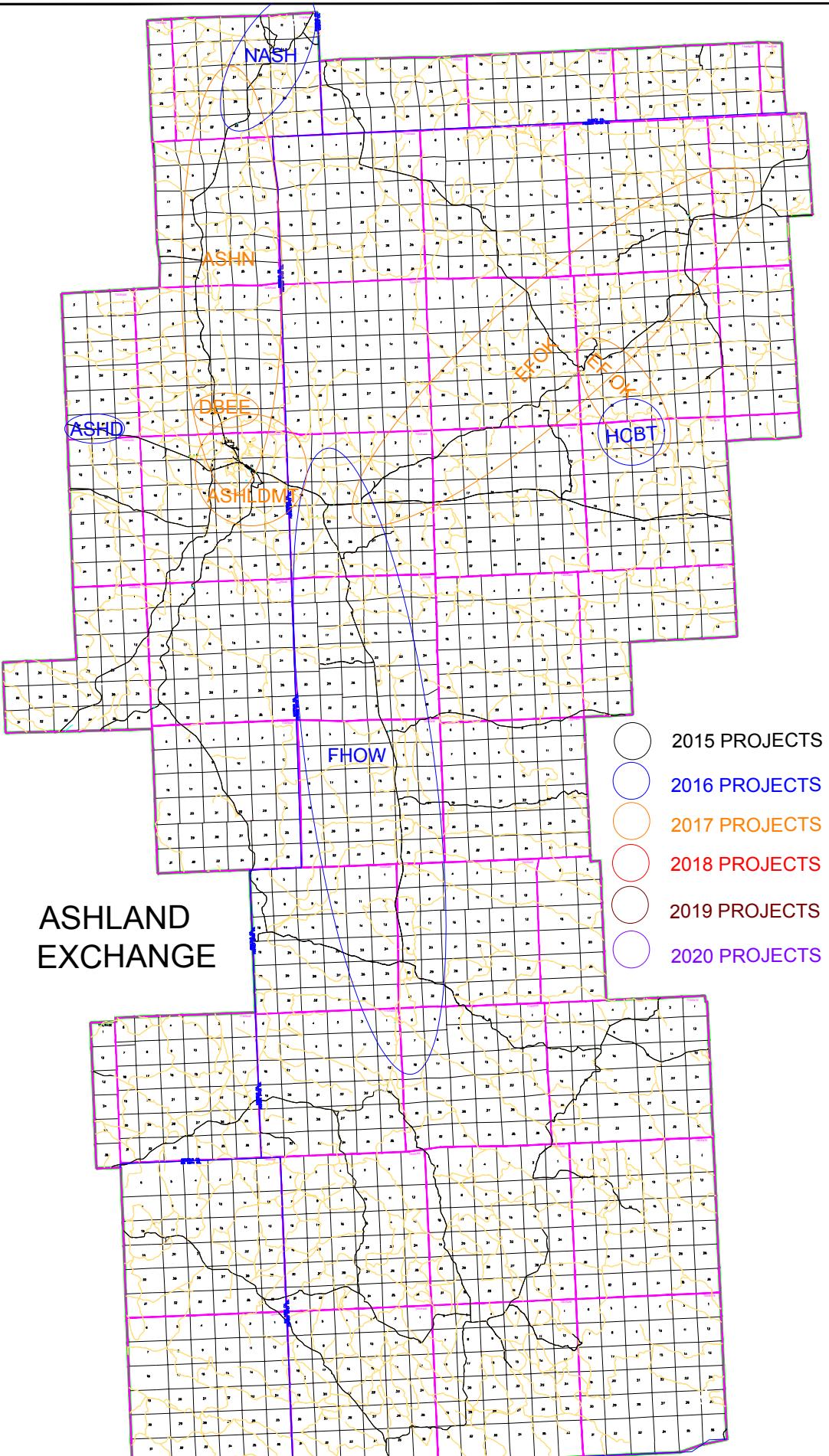
The Hysham FTTP project includes new placement of approximately 15.03 route miles of fiber optic infrastructure and electronics. The Hysham ESAI connects two hundred and two (202) premises in a less than one-half (1/2) square mile area. When complete the ESAI will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for

this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2020 calendar year.

**LAME DEER FIBER TO THE PREMISE CONSTRUCTION YEAR 1 - LMDRMT**

The Lame Deer FTTP project includes new placement of approximately 6.83 route miles of fiber optic infrastructure and electronics. The Lame Deer ESAI connects forty-three (43) premises in a four (4) square mile area. When complete the ESAI will support broadband service speeds of 20MB downstream and 5MB upstream. Anticipated funding for this project will be provided under a new Rural Utilities Service (RUS) loan design. Both the engineering and the construction of this project will be assigned to contract service providers. Expected completion of this project is within the 2020 calendar year.







2015 PROJECTS



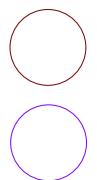
2016 PROJECTS



2017 PROJECTS

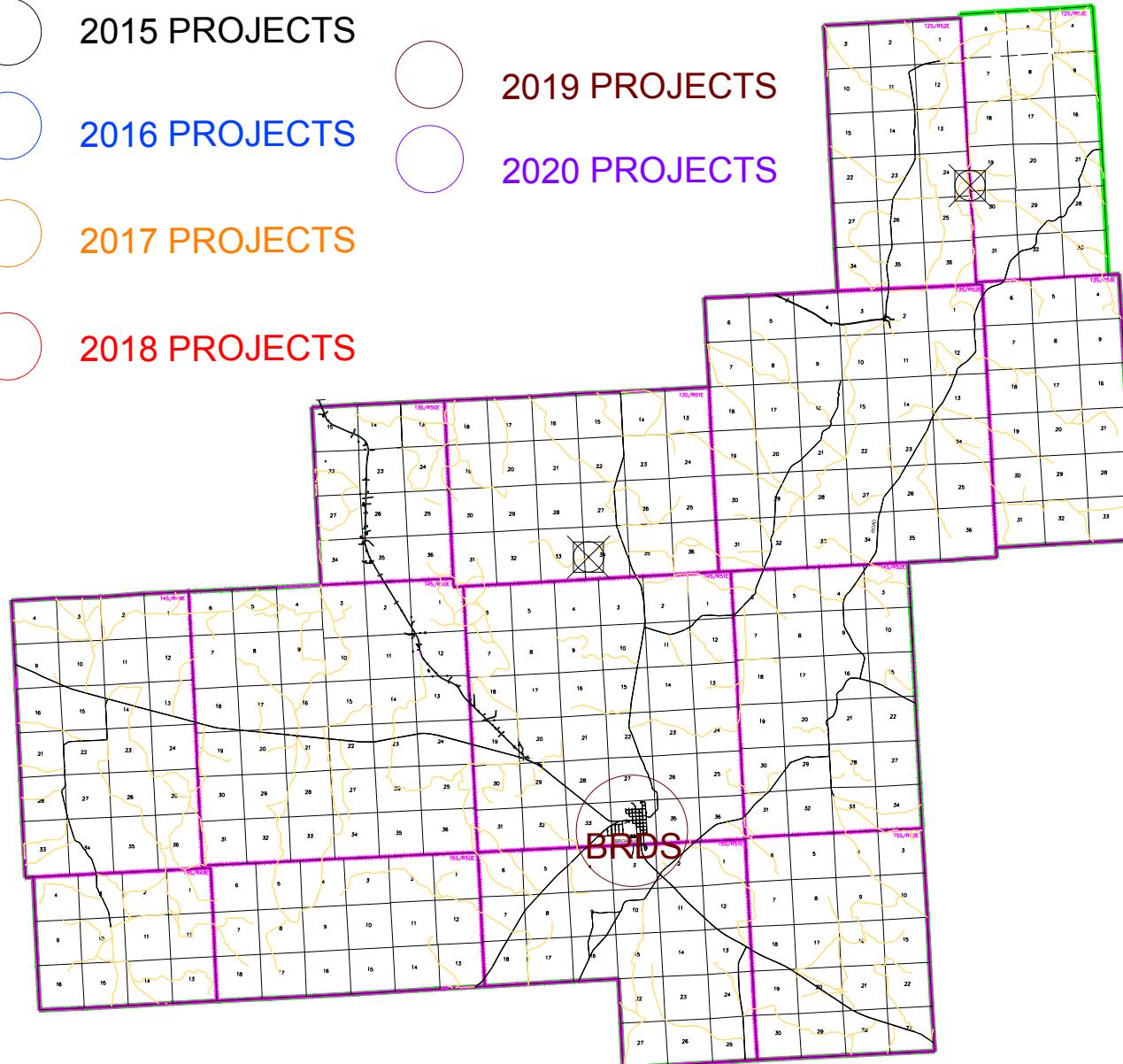


2018 PROJECTS



2019 PROJECTS

2020 PROJECTS

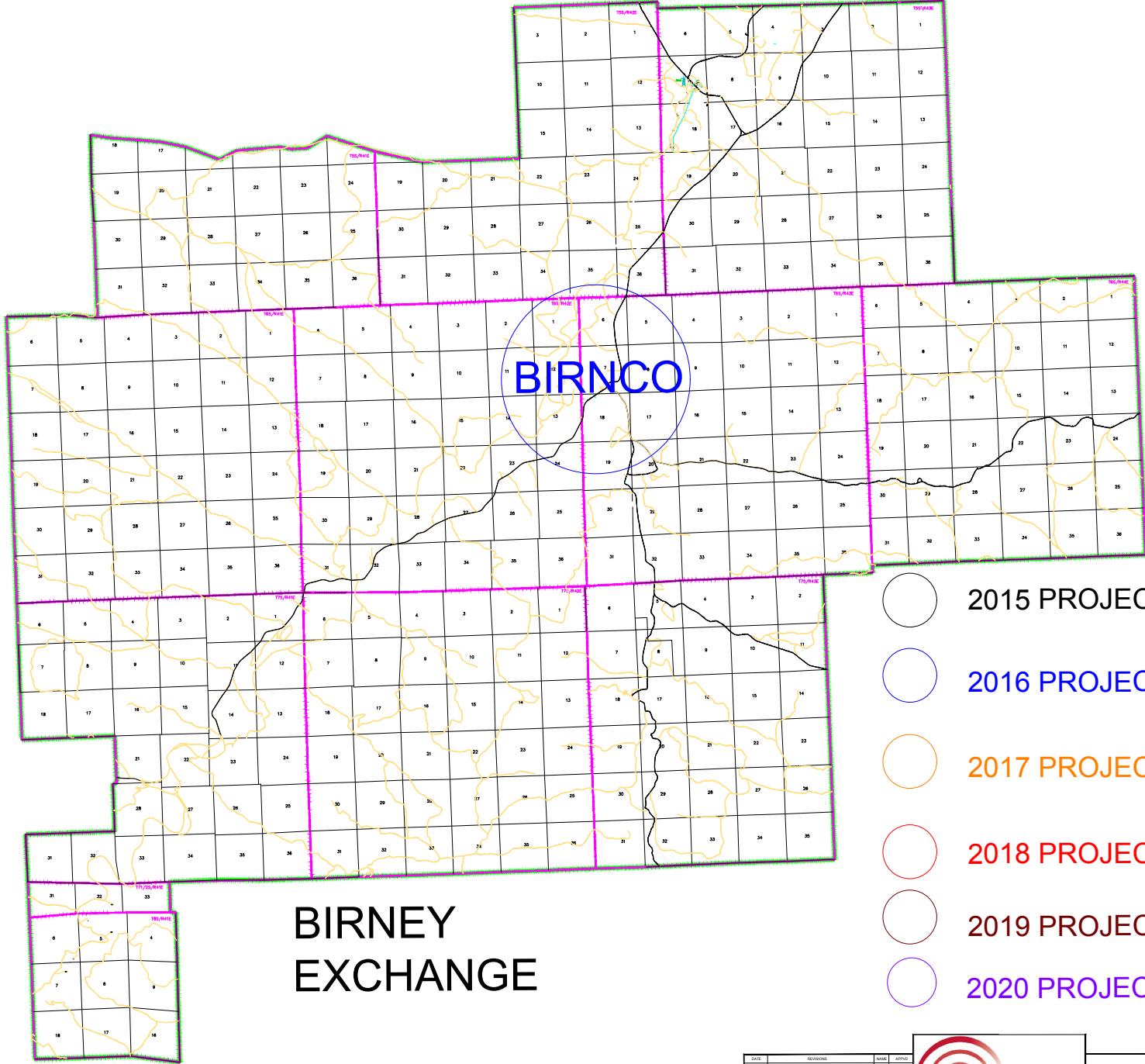


NOTE: BLM AND STATE LANDS ARE HAND DRAWN AND MAY NOT BE EXACT.

ACRE	DESCRIPTION	CODE
	BLM LAND	C1
	STATE LAND	C2
	ROADS NOT DRAWN	C3
	ADDED STATE LAND INFORMATION	C4
	ADDED BLM INFORMATION	C5
	ADDED STATE LAND INFORMATION	C6
	ADDED BLM INFORMATION	C7
	ADDED STATE LAND INFORMATION	C8
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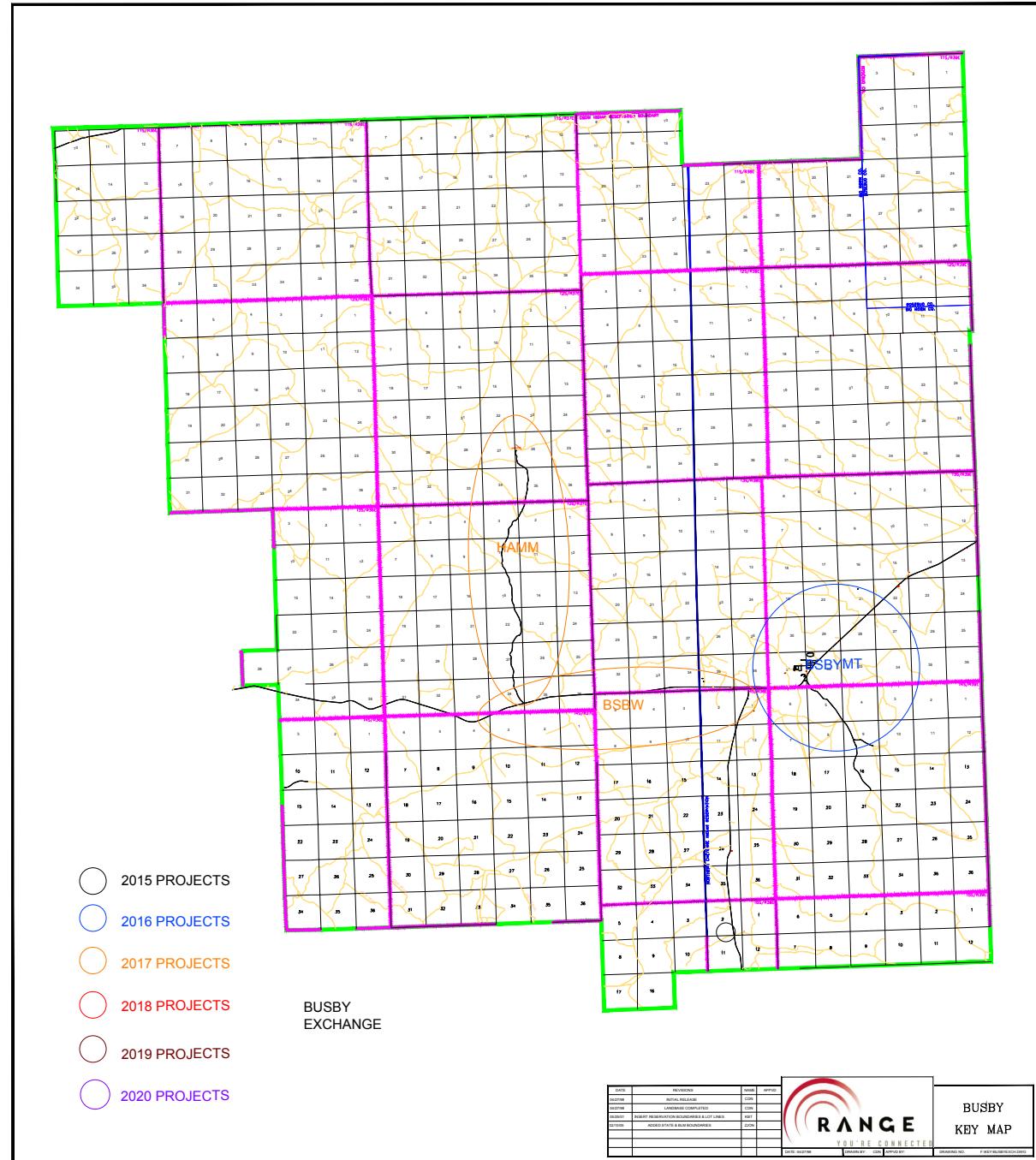
BROADUS  
KEY MAP

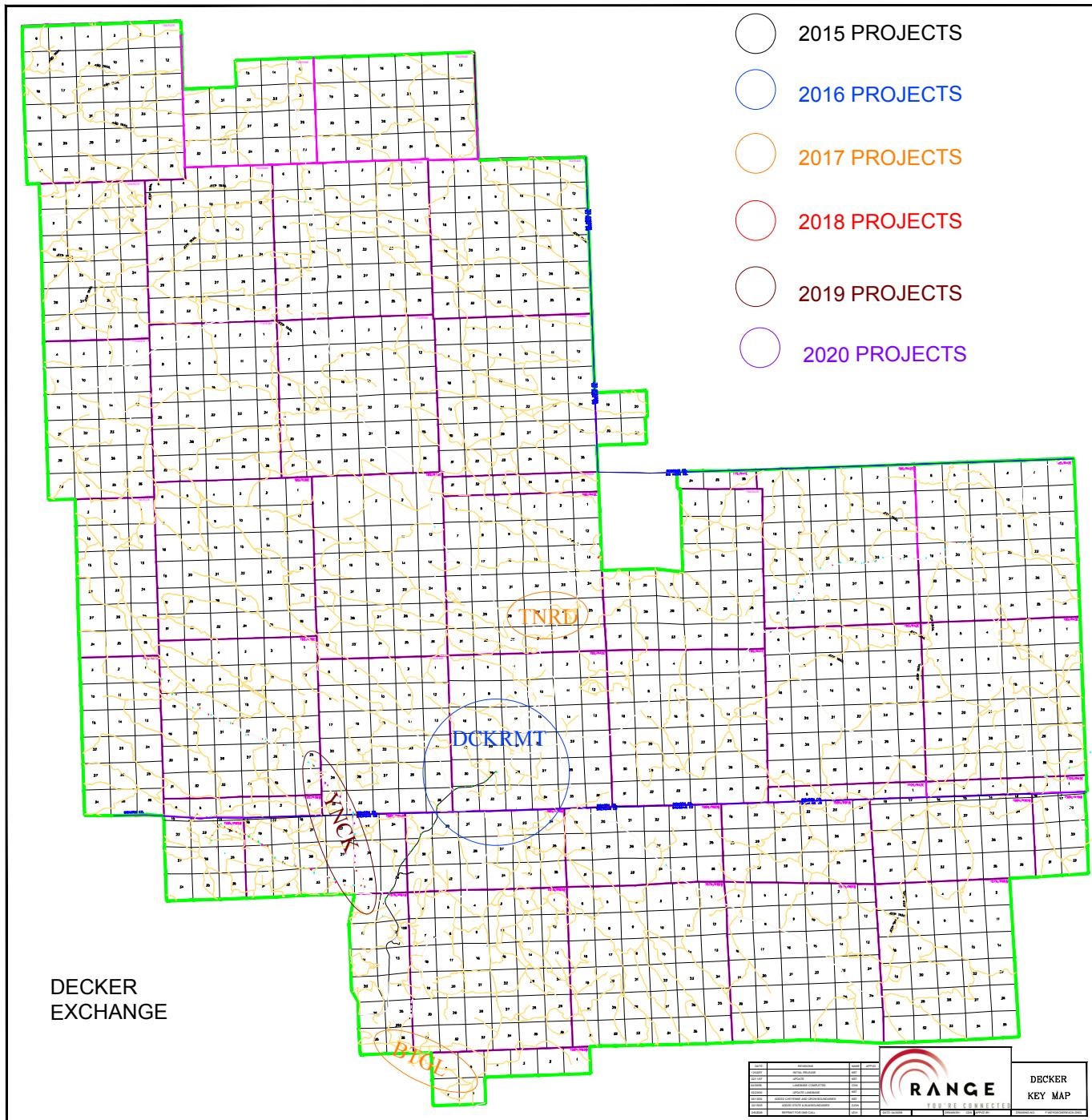


ITEM	DESCRIPTION	STATUS	APPROV'D
09-0000	INITIAL RELEASE	READY	
09-0000	ADDED REGRADATION BOUNDARIES	READY	
12-0000	ADDED CUSTOM NATIONAL FOREST	ZUMO	
02-0000	ADDED BLM & STATE BOUNDARIES	ZUMO	
02-0000	ADDED 2010 FAIR CONTRACT	ZUMO	

RANGE  
YOU'RE CONNECTED

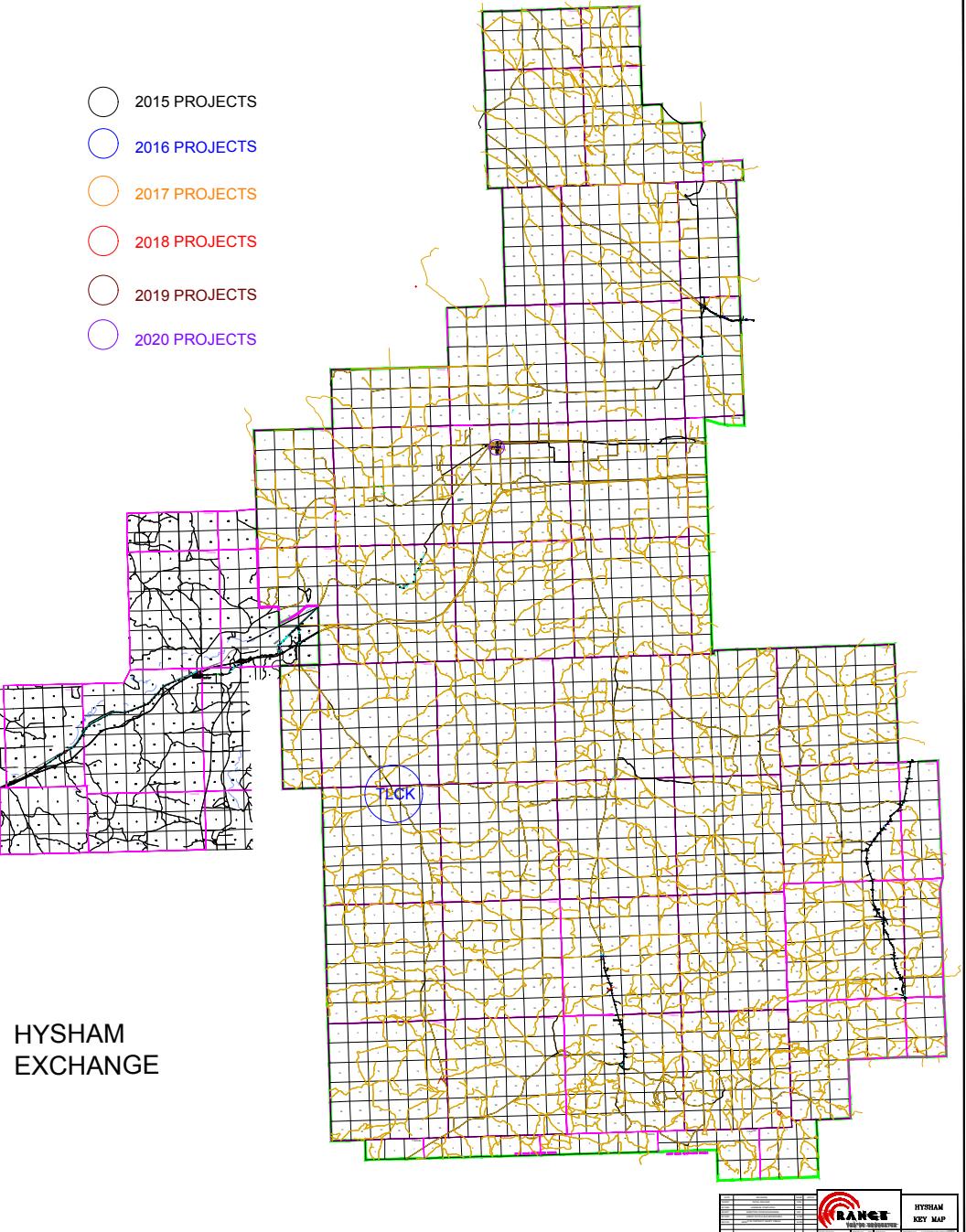
BIRNEY  
KEY MAP

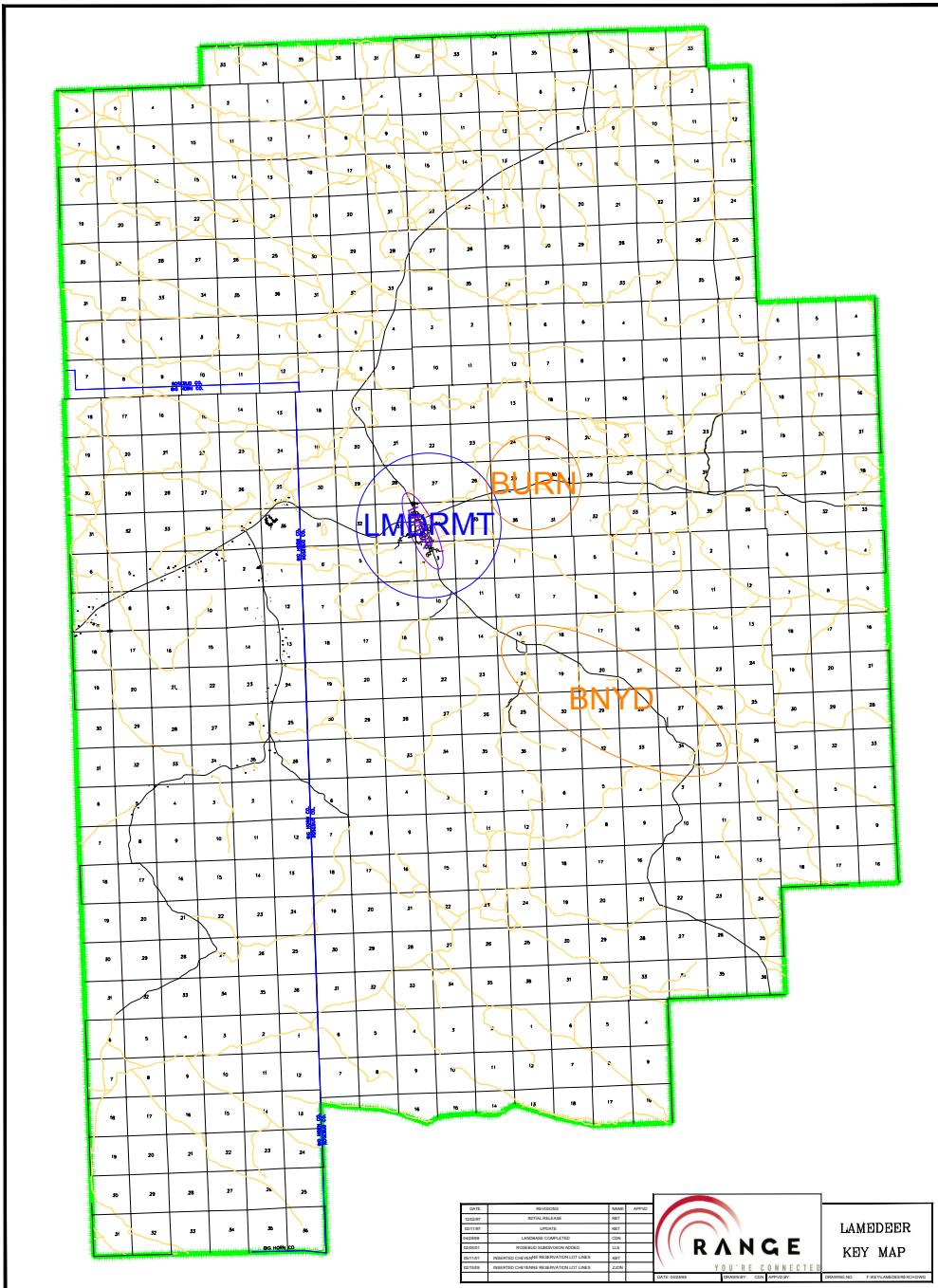




- 2015 PROJECTS
- 2016 PROJECTS
- 2017 PROJECTS
- 2018 PROJECTS
- 2019 PROJECTS
- 2020 PROJECTS

HYSHAM  
EXCHANGE





- 2015 PROJECTS
- 2016 PROJECTS
- 2017 PROJECTS
- 2018 PROJECTS
- 2019 PROJECTS
- 2020 PROJECTS

 2015 PROJECTS

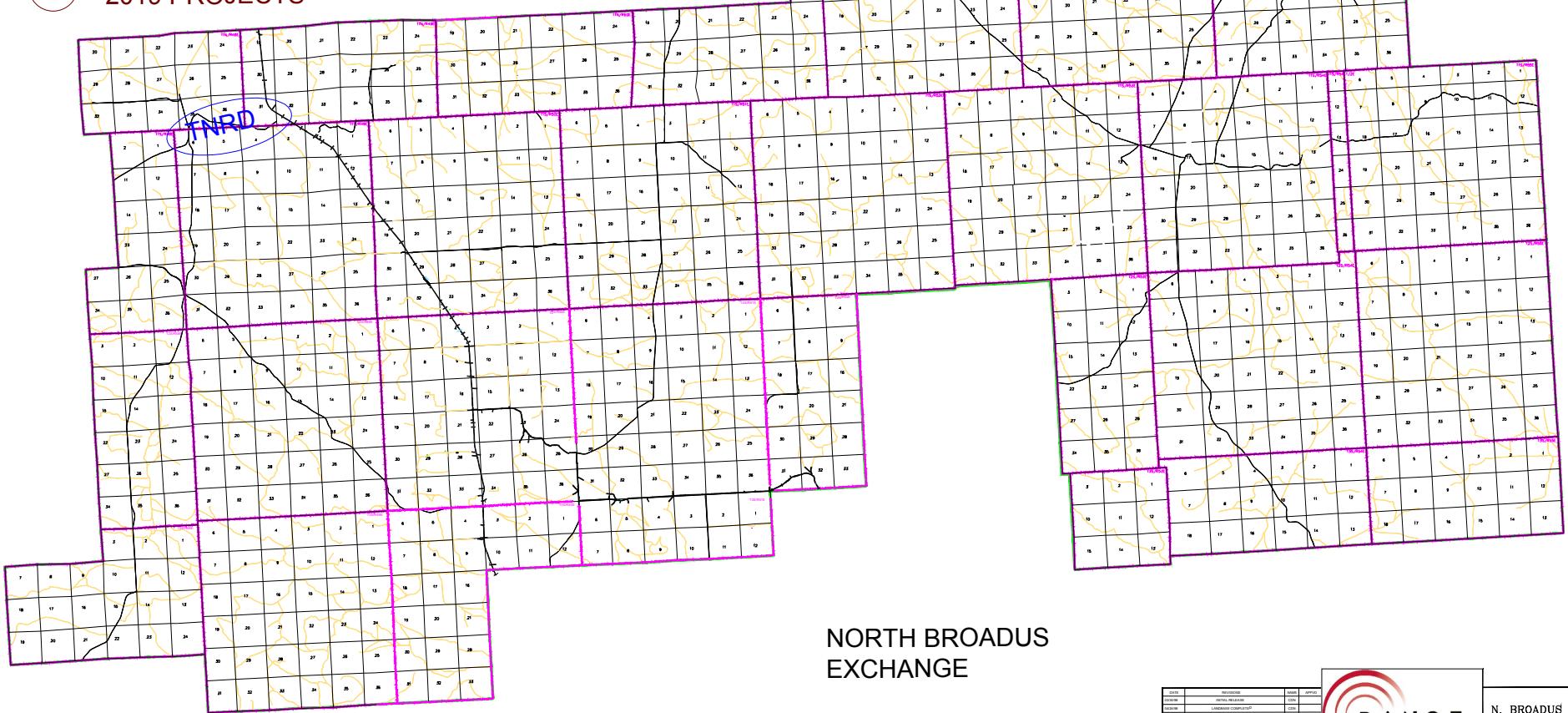
 2016 PROJECTS

 2017 PROJECTS

 2018 PROJECTS

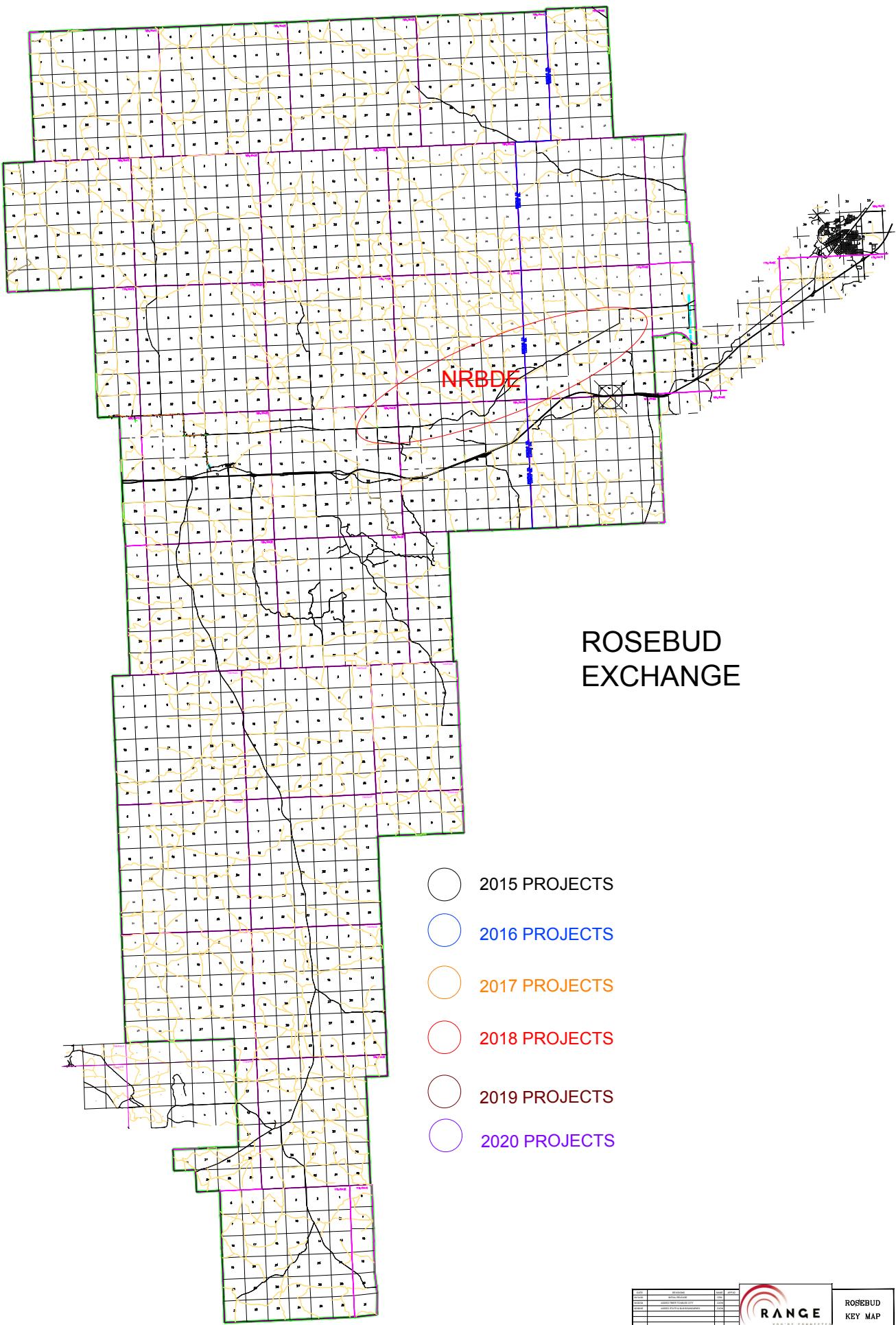
 2019 PROJECTS

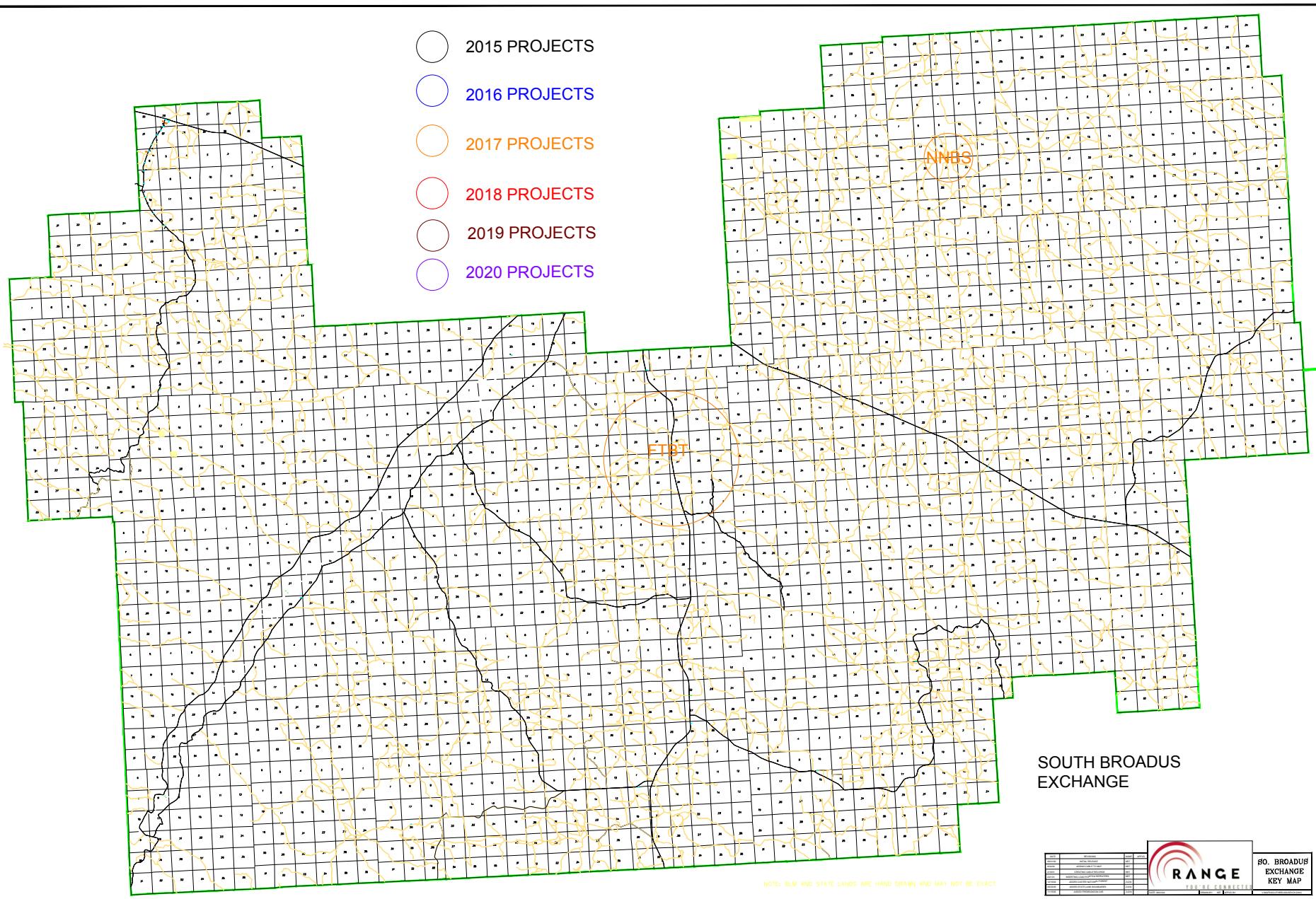
 2020 PROJECTS



NORTH BROADUS  
EXCHANGE





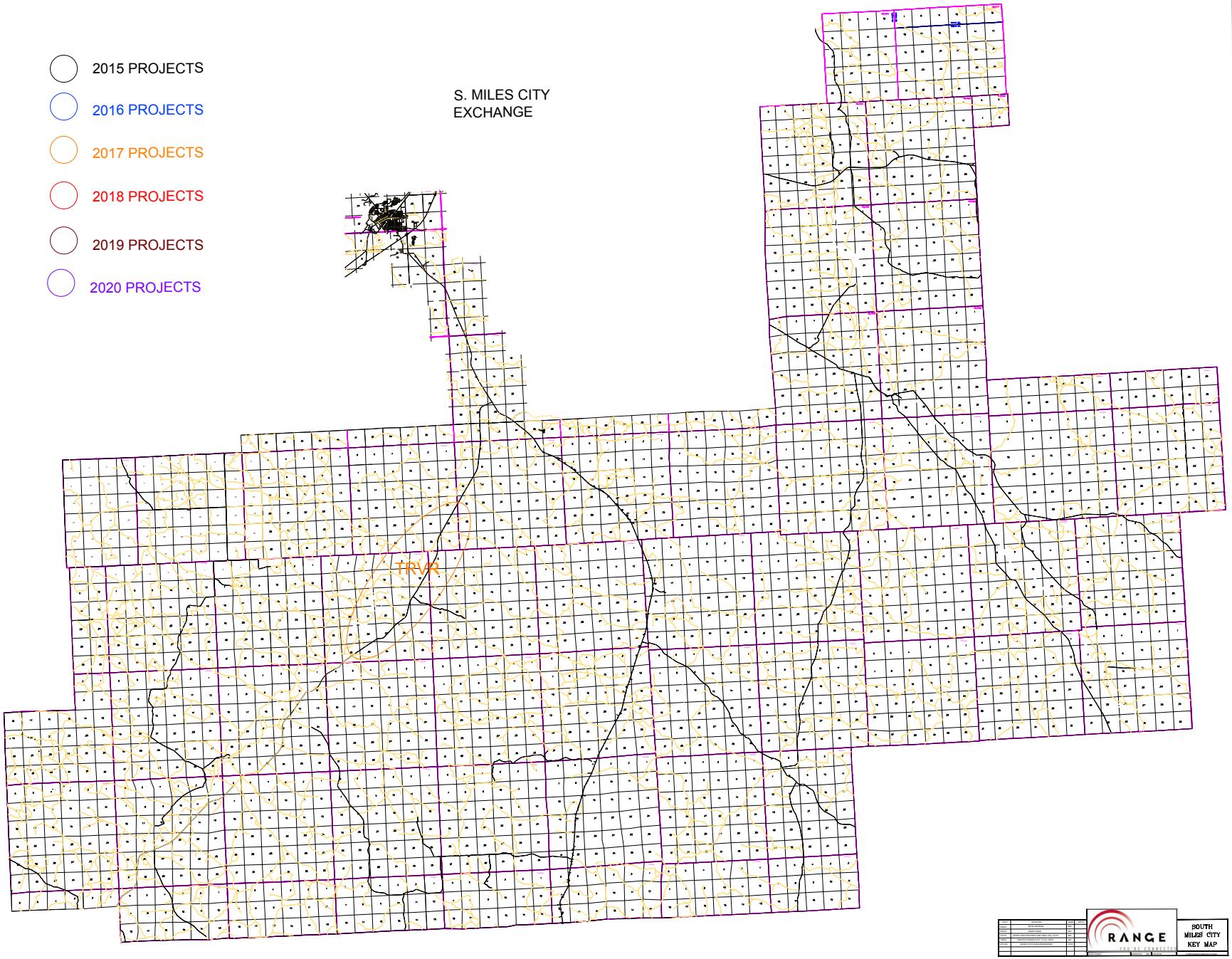


NOTE: BLM AND STATE LANDS ARE HAND DRAWN AND MAY NOT BE EXACT.



- 2015 PROJECTS
- 2016 PROJECTS
- 2017 PROJECTS
- 2018 PROJECTS
- 2019 PROJECTS
- 2020 PROJECTS

S. MILES CITY  
EXCHANGE



SOUTH  
MILES CITY  
KEY MAP